

### REMARKS

Claims 1-18 and 43-56 were presented for examination and were rejected. Applicants amended claims 1, 5-7, 9, 43, 44, and 46 in their Amendment B filed July 19, 2004, but the Examiner apparently did not take these amendments into account in his recent Office Action. Reconsideration of this application as amended, and allowance of all claims remaining herein, claims 1-18 and 43-56 as amended, are hereby respectfully requested.

In his third paragraph, the Examiner rejected claims 46 and 55 under 35 U.S.C. § 101 as being non-statutory.

The Examiner stated: "In this particular case the program instructions are not recited as embodied on the medium only that program instructions are 'for enabling'."

The Examiner's rejection is traversed. Each of claims 46 and 55 recites a "computer readable medium comprising computer program instructions...". Thus, the program instructions are in fact recited as embodied on the medium, contrary to the Examiner's assertion.

For the above reasons, the Examiner is requested to withdraw his rejection of claims 46 and 55.

In his sixth paragraph, the Examiner rejected claims 1, 2, 8, and 10-18 under 35 U.S.C. § 103(a) as being unpatentable over Kitchen in view of Silverman.

In the rejected claim set, the only independent claim is claim 1. The Examiner admits that Kitchen does not disclose the recitation in claim 1 that the central computer is adapted to convey to each agent individualized current tradable bid and offered prices and sizes subject to that agent's flow limits, but asserts that Silverman does disclose this recitation.

Applicants amended claim 1 in their Amendment B to recite that the current tradable bid and offered prices and sizes are conveyed to each agent to a depth, and that said prices, sizes, and

depth are automatically determined by and take into account all of the current flow limits between all pairs of agents. This feature of the present invention is radically different from the method by which bid and offered prices and sizes are presented to Silverman's agents, as follows:

1. In Silverman, the depth (number of current tradable bid and offered prices and sizes presented to an agent, i.e., the number of potential deals) is pre-selected by the human trading agent. Column 2 line 39 through column 3 line 7; column 8 lines 41-58. Amended claim 1, on the other hand, recites a depth that is always automatically determined by computer by all of the current flow limits between all pairs of agents. In Silverman, there is a special case, which undoubtedly occurs infrequently, in which depth is set by the host computer when the amount of available bandwidth becomes constrained. Column 2 line 64 through column 3 line 2. In this special case, Silverman's computer sets the depth to avoid communication problems due to bandwidth. In the present invention, depth is not so limited, because the depth is always and constantly subject to available credit and is precomputed for each agent, taking into account all flow limits between all pairs of agents, and then doing a computation for each and every agent. This is a huge departure from simply limiting depth due to bandwidth because a communication network is congested.

2. In Silverman, the current tradable bid and offered prices and sizes that are presented to a trading agent are "limited by unilateral and/or bilateral credit availability" between that agent and another single agent. Column 2 lines 45-46. On the other hand, claim 1 as amended recites that the current tradable bid and offered prices and sizes take into account all of the current flow limits between all pairs of agents. Applicants' flow (trading) limits are calculated by their computer 1 and are derived from the credit limits that are specified in the contracts between the trading agents 2 and the guaranteeing agents 5. Page 52 lines 12-14.

The fact that Applicants' current tradable bid and offered prices and sizes take into account all of the current flow limits between all pairs of agents enables the present invention to accomplish what Silverman is not able to accomplish. Namely, in the present invention, if agents A and B do not have a credit relationship with each other, they still may be able to trade with each other. In Silverman, if agents A and B do not have a credit relationship with each other, they are not able to trade with each other.

3. In Silverman, orders are conveyed to the trading agent only if they fall within the specified depth set by the agent. Changes in prices that fall outside of the pre-specified depth are not presented. Column 8 lines 41-58. In the present invention, on the other hand, these changes are conveyed, because all of the current flow limits between all pairs of agents are taken into account in what is conveyed, and there is no pre-specified depth in the present invention. Rather, there is a dynamically computed depth in the present invention, so all possible deals that the agent can view and act on are always presented, up to the agent's credit availability, which credit availability is computed by taking into account all of the trading limits between all pairs of agents.

Claims 2, 8, and 10-18 are dependent claims depending upon claim 1, which, as discussed above, is patentable. Furthermore, these dependent claims recite patentable features in their own right. For example, claims 11-18 recite features of Applicants' Application Programming Interface (API). An API is not suggested by the prior art.

For the above reasons, the Examiner is requested to withdraw his rejection of claims 1, 2, 8, and 10-18; and to allow these claims as amended.

In his seventh paragraph, the Examiner rejected claims 3 and 4 under 35 U.S.C. § 103(a) as being unpatentable over Kitchen in view of Silverman and further in view of Feilbogen.

In the first sentence of his rejection, the Examiner refers to the patent to Togher. The relevance of Togher is not understood, inasmuch as Togher was not one of the three references that the Examiner cobbled together to make his rejection.

Claims 3 and 4 are dependent claims, depending upon claim 1, which, as discussed above, is patentable. Therefore, the patentability of claims 3 and 4 flows from the patentability of claim 1.

Furthermore, while Feilbogen describes his nodes as extending credit and not extending credit, Feilbogen's nodes perform the functions of holding account details and performing broker (bookkeeping and settling of trades) services only. The agent nodes of the present invention, on the other hand, perform functions well beyond this, for example: how credit is set, which agents receive credit, which agents are allowed to see and deal, communications regarding how other credit extending agents may be affected, and communications between agents themselves.

Applicants believe that it is not necessary to place any additional limitations into claims 3 and 4, however, because claims 3 and 4 depend upon claim 1, and Feilbogen does nothing to strengthen the above rejection of claim 1 asserted by the Examiner.

With respect to claim 4, Feilbogen does not suggest the particular configuration recited in claim 4.

For the above reasons, the Examiner is requested to withdraw his rejection of claims 3 and 4; and to allow these claims as amended.

In his eighth paragraph, the Examiner rejected claims 5-7 and 9. The Examiner rejected claims 5-7 under 35 U.S.C. §103(a) as being unpatentable over Kitchen in view of Silverman in further view of Wilton. The Examiner rejected claim 9 in view of Kitchen in view of Togher in further view of Wilton. However, judging from the Examiner's reliance on Silverman rather

than Togher in the third sentence of his rejection, it appears that the Examiner also meant to reject claim 9 in view of the combination of Kitchen, Silverman, and Wilton.

Claims 5-7 are dependent claims depending upon claim 1. Amended claim 1, as discussed above, is patentable. Therefore, it follows that claims 5-7 are likewise patentable.

Applicants made some amendments to claims 5-7 in their Amendment B. In claim 5, Applicants clarified that the trade-seeking agents can be any combination of credit-extending agents and non-credit-extending agents. Thus, when the instructing credit-extending agent instructs the central computer that it is permissible to have two such trade-seeking agents perform trades via said instructing credit-extending agent, there are three possibilities:

1. Both trade-seeking agents are credit-extending agents.
2. Both trade-seeking agents are non-credit-extending agents.
3. One of the trade-seeking agents is a credit-extending agent and the other trade-seeking agent is a non-credit-extending agent.

The amendment to claim 6 was simply to make the language of claim 6 consistent with the new language of claim 5.

The amendment to claim 7 was simply to put a hyphen between "non" and "credit" in the expression "non-credit-extending agent."

Applicants made some clarifying amendments to independent claim 9 in their Amendment B. A claim 5-like amendment was made to recite that the commonly-coupled credit-extending agent has trading channels with at least two trade-seeking agents from the group of agents consisting of credit-extending agents and non-credit-extending agents, rather than with at least two non-credit-extending agents. And a claim 1-like amendment was made to recite that the individualized current tradable bid and offered prices and sizes are conveyed to a depth, said

prices, sizes, and depth automatically determined by and taking into account all of the current credit limits between all pairs of agents. In claim 1, the term "flow limits" is used instead of "credit limits." As recited in claim 56, and as discussed above, an agent's flow limits are a function of that agent's credit limits.

The Examiner admitted that "Kitchen et al in view of Silverman et al (083) also does not disclose the credit-extending and non-credit extending agent relationships as recited in claim 9." Therefore, the Examiner needed to add Wilton to the mix of references in order to make his rejection. However, Wilton does not suggest Applicants' recitation in claim 9 that "it is permissible to have at least two such trade-seeking agents perform trades via said commonly-coupled credit-extending agent in a credit bridge". Credit bridges are specifically defined on page 9 lines 1-9 of the present specification as follows: "Credit-extending agents 5 that allow the central computer 1 to utilize a portion of their trading channels 3 to allow other agents 2 to trade with each other are referred to as 'credit-bridging agents' 5. In a preferred implementation of the present system, existing banks, financial institutions, and clearing entities are credit-bridging agents 5 as well as credit-extending agents 5; and existing trading customers of those institutions 5 are clients 4."

Furthermore, there is no central computer in Wilton as recited in amended claim 9. Among other things, this makes it impossible to combine the decentralized system of Wilton with the centralized systems of Kitchen and Silverman, which do have central computers. Since it is impossible to combine Wilton with Kitchen and Silverman, it is likewise impossible to use them as references to deny the patentability of amended claim 9.

For the above reasons, the Examiner is requested to withdraw his rejection of claims 5-7 and 9; and to allow these claims as amended.

In his ninth paragraph, the Examiner rejected claims 43-55 under 35 U.S.C. §103(a) as being unpatentable over Kitchen in view of Silverman in further view of Neyman in further view of Mandler.

Applicants made minor wording amendments to claims 43, 44, and 46 in their Amendment B. Specifically, these claims now recite that the multi-hop trading limits take into account "credit extended by credit bridges between agents" rather than simply "credit bridges between agents." The new terminology more accurately reflects the recited phenomenon.

The Examiner admitted that "Kitchen et al in view of Silverman et al (083) does not disclose multi-hop trading limits between agents or graphing a network comprising nodes representing agents." Therefore, the Examiner added Neyman to the list of references upon which to construct his rejection. The Examiner cited Neyman as teaching multi-hop trading limits between agents (para. 0019) utilizing an algorithm (para. 0064) and graphing a network comprising nodes representing agents (figs. 4-7).

All of the independent claims of this rejected set (claims 43, 44, 46, 47, 49, 53, and 55) recite multi-hop trading limits. Neyman does not suggest multi-hop trading limits as that term is defined in the present application. As stated in the present specification, a multi-hop deal is realized through real or virtual back-to-back trades by one or more credit-bridging agents 5. Page 9 lines 26-28. Thus, the concepts of multi-hop trades and credit bridging go hand in hand. Credit bridges are specifically defined on page 9 lines 1-9 of the present specification as follows: "Credit-extending agents 5 that allow the central computer 1 to utilize a portion of their trading channels 3 to allow other agents 2 to trade with each other are referred to as 'credit-bridging agents' 5. In a preferred implementation of the present system, existing banks, financial institutions, and clearing entities are credit-bridging agents 5 as well as credit-extending agents 5; and existing trading customers of those institutions 5 are clients 4."

A credit bridge facilitates a trade between two agents. A credit bridge allows its client agents to utilize their own trading channels or credit relationships, and to trade using the credit bridge as an actual counterparty to each trade, as opposed to brokering or serving as a settling agent ex-post the trade, like in Mandler. Credit bridges perform a key role ex-ante, by setting credit limits that govern what agents see and are able to deal on. This is a key role ex-ante, with the credit bridge serving as an actual counterparty to its clients' trades, and performing a back-to-back trade to offset the "opposite" trade another agent has done. For example, if a credit bridge has apportioned a trading channel to Agent 1 of 100mm and to Agent 2 of 300mm, and if Agent 2 posts that he wants to sell 500mm worth of an item, the present invention allows the credit bridge to limit the order size presented to the credit bridge automatically and without manual or human interference, to 300mm. Also, automatically and without human interference, the present invention allows the credit bridging agent to display to Agent 1 that the credit bridge is willing to sell to Agent 1 100mm worth of the item, since that is the limit of Agent 1. If Agent 1 buys 50mm, he has used up 50mm worth of credit. He has bought 50mm from the credit bridge, and the credit bridge has bought 50mm from Agent 2. The credit bridge also sold 50mm to Agent 1 and Agent 2 has sold 50mm to the credit bridge. Therefore, the credit bridge does not hold any inventory, although it has bought and sold (it has allowed its client agents to buy and sell, with the credit bridge serving as a credit bridge, as defined).

In the present application, multi-hop trading limits are trading limits that define how the agents in the network are allowed to trade with each other, taking into account all the credit relationships between all agents coupled to the network, encompassing all credit bridging. See Table 1 on page 29 and accompanying description.

All of the independent claims in the rejected set recite that Applicants' multi-hop trading limits encompass credit bridges between agents. There is no credit bridging in Neyman. In Neyman, the trade is between one trading agent and another trading agent. While it is true that there may be one or more brokers interspersed between the two trading agents, the brokers do not



serve as credit bridges. All the brokers do is pass along a subset of the available market information in a secure fashion. A broker does not give up a portion of its trading channel (flow limit) to facilitate a trade, or serve as an actual counterparty to trades between its clients, or between itself and other brokers, as required by a credit bridge. See Applicants' specification page 9, lines 1-9. Brokers broker trades; they do not serve as credit bridges.

In Neyman, if trading agent A has no credit with trading agent B, the trade cannot take place. If these agents were instead trading using Applicants' invention, the trade might very well take place, depending upon the current trading (flow) limits in the network. Said trading limits are based upon a) the underlying credit limits between trading agents and credit bridges; and b) the underlying credit limits between the credit bridges in the network. In Applicants' invention, the trading (flow) limits are updated after each trade, reflecting the loss of the trading capacities that were used up during the trade, as facilitated by the credit-bridging agents in the network. There is no such sophisticated re-deployment of trading limits in Neyman, and there are no credit bridges in Neyman.

The Examiner admits that "Kitchen et al in view of Silverman et al (083) further in view of Neyman et al do not disclose credit bridges between agents." Thus, the Examiner added Mandler to the set of references upon which he constructed his rejection, as the Examiner has alleged that Mandler discloses credit bridges. The Examiner's admission that neither Kitchen nor Silverman nor Neyman discloses credit bridges is the same as admitting that neither Kitchen nor Silverman nor Neyman discloses multi-hop trades, because the concepts of credit bridges and multi-hop trades go hand in hand, as discussed above. Therefore, in order to defeat the Examiner's rejection, it is sufficient to show either that Mandler does not disclose credit bridges or that Mandler does not disclose multi-hop trades.

The Examiner cites Mandler's financial clearinghouse 40 as a credit bridging agent. However, financial clearinghouse 40 is not a credit bridging agent as that term is defined in the present application.

To repeat, credit bridges are specifically defined on page 9 lines 1-9 of the present specification as follows: "Credit-extending agents 5 that allow the central computer 1 to utilize a portion of their trading channels 3 to allow other agents 2 to trade with each other are referred to as 'credit-bridging agents' 5. In a preferred implementation of the present system, existing banks, financial institutions, and clearing entities are credit-bridging agents 5 as well as credit-extending agents 5; and existing trading customers of those institutions 5 are clients 4."

A credit bridge facilitates a trade between two agents. Mandler's financial clearinghouse 40 does not come into play until after the trade has taken place. Applicants' claims 43-55 are all directed to the trades themselves, not to the post-trade backroom activities to which Mandler's financial clearinghouse 40 finds applicability.

Second, in Mandler, only the payment goes through financial clearinghouse 40, not the delivery of the goods being traded. In the present invention, both the payment and the delivery of the commodities or financial instruments being traded are performed through the intermediate credit bridge. This is a substantial improvement over Mandler and the rest of the prior art. It is an improvement over Mandler because it offsets delivery risk for both payment of an item and delivery of the item.

Third, in Mandler, all parties to the post-trade clearing are aware of each other. In the present invention, on the other hand, credit bridging permits anonymous trading.

Fourth, inherent in the concept of the credit bridge giving up a portion of its trading channel is the concept of "legal counterparty." In the present invention, the credit bridge is made a legal counterparty to any trade executed via a trading channel extended by the credit bridge.

i.e., a trading channel of the credit bridge that the credit bridge gives up, in whole or in part, to other agents so that said other agents can make a trade they otherwise wouldn't be able to make. For example, let's assume that Party A buys a car from Party B on eBay and pays for it using PayPal. If Party B takes the money but doesn't deliver the car, Party A has no recourse. In the present invention, on the other hand, the credit bridge is a legal counterparty to the trade, so that if Party B doesn't deliver the car to Party A, the credit bridge is obligated to deliver the car to Party A. In other words, the credit bridge is an obligator on the trade. As another example, let us assume that currency (foreign exchange) is being traded using the present invention. If Party A buys EUR and sells USD to Party B, the credit bridge will take EUR from Party B's account and deposit USD to Party B's account, and do the opposite to Party A's account, thus offsetting the trade. If Party B does not have the EUR for the credit bridge to take, the credit bridge is nevertheless required to send the EUR to Party A.

Fifth, in Mandler, there is always exactly one financial clearinghouse 40 involved in the post-trade clearing procedure, whereas in the present invention, there can be zero, one, or many credit bridging nodes that take part in a single transaction.

There is a fundamental difference between Mandler's system, in which a buyer and seller approach a third party financial clearinghouse 40 after they have agreed to a trade, and the present invention's anonymity preserving system in which a central computer evaluates all possible multi-hop trades, and displays those trades to all users that are pre-cleared for credit, across an arbitrary network of intermediaries, taking into account all credit relationships, before a buyer and a seller are matched. When an agent sees a price on the present invention, it means that the price can be matched taking into account existing credit relationships. The using agent has only to hit a button to consummate the transaction.

For the above reasons, the Examiner is requested to withdraw his rejection of claims 43-55; and to allow these claims as amended.

Applicants believe that this application is now in condition for allowance of all claims herein, claims 1-18 and 43-56 as amended; and therefore an early Notice of Allowance is respectfully requested. If the Examiner disagrees or believes that, for any other reason, direct contact with Applicants' attorney would help advance the prosecution of this case to finality, he is invited to telephone the undersigned at the number given below.

Respectfully submitted,

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